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COMMENTARY

# Solving theoretical and empirical conundrums in international strategy research: Linking foreign entry mode choices and performance

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**Abstract**
Several theoretical and empirical developments in the literature on foreign entry mode and performance, and on (international) strategy more generally, were influenced or prefigured by Brouthers' (2002) *JIBS* Decade Award winning paper. Regarding theory, Brouthers is an archetype of the integration of transaction cost and institutional perspectives. I argue that it is also relevant to the growing literature that aims at synthesizing these and other perspectives. Methodologically, Brouthers (2002) contributed several uniquely direct and rich measures. Furthermore, it not only displayed awareness of endogeneity (specifically self-selection) issues, but also was among the pioneers in the comparative analysis of governance choices for a given firm or transaction. I elaborate on the promising if challenging use of such "what if" imputation to identify the impact of more or less well-aligned choices. Overall, I argue that such methodological advances cannot be decoupled from the conceptual advances that enable them, and which they reinforce.
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## BROUTHERS' (2002) CONTRIBUTIONS AND ONWARDS

This article takes as a starting point Brouthers (2002), the *JIBS* Decade Award winner for 2012. As befits such an award winner, Brouthers (2002) has had a remarkable impact. I trace this impact to a series of contributions, and elaborate not just on this past impact, but also on promising theoretical and methodological directions for research on mode of entry (MOE) choice and performance.[1] In so doing, I aim to propose some research directions that hold sufficient promise to keep MOE research vibrant, while avoiding the pitfalls discussed by Shaver (2013).

Brouthers (2002) was a pioneering combination, as follows. It was among the first separately, and the very first simultaneously, to (a) examine the effects of mode of MOE choice on performance, (b) using multiple explanatory perspectives, (c) for two different dimensions of performance, and (d) taking into account endogeneity (specifically self-selection) of MOE decisions in a comparatively thorough manner. The general theme of this article will be

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that while some of these contributions have already been rather widely acknowledged (especially the ones first listed), several more latent contributions deserve more attention, given promising research areas in the field of international business (IB) and related fields such as strategy. Thus Brouthers' (2002) contributions create extra value as a set, and in ways that could yet inform a new wave of MOE research.

By the late 1990s, the study of the determinants of MOE choice was well advanced, and codified in many textbooks and articles. Yet, even in the most thorough treatises, the matter of performance tended to be handled as a matter of goal setting and control more than as an object of study in itself (e.g., Root, 1998). This may have been just as well, for issues of endogeneity lurk deep in this research area, such that plain predictions associating a given MOE with inferior or superior performance are likely to reflect conceptual misspecification, and the results thereof are sensitive to unobserved heterogeneity (Caves, 1998; Shaver, 1998). Brouthers (2002) can be considered the first empirical paper in the *Journal of International Business Studies* (*JIBS*) to display awareness of endogeneity and to make use of this to develop further insights into a conditional MOE–performance relationship. As such it is an important milestone in the study of international strategy.

Yet perusal of the forward citations to Brouthers' paper shows that subsequent work has so far noticed it mostly for other contributions. The forward citations cluster around two themes. One involves the combination of explanatory perspectives. In this respect, the most commonly noted contribution is the inclusion of an institutional component in Brouthers' explanatory apparatus (e.g., Demirbag, Tatoglu, & Glaister, 2008). This is understandable, insofar as Brouthers' paper was one of the first quantitative applications of institutional theory in *JIBS*, as well as one of the first to combine transaction cost and institutional explanation to explain performance. I will discuss the manner and contents of this combination, and in so doing argue that Brouthers (2002) is also inspiring for recent developments in theorizing about MOEs. The other cluster of forward citations pertains to measurement – in some cases specific items or variables (e.g., Cui & Jiang, 2009), but especially the multidimensional measurement of performance, including perceptual items that are relatively scarce in MOE research (Hult et al., 2008). I will argue that this aspect is all the more important when considering the promise of Brouthers' (2002) last, if so far relatively underrecognized contribution: acting on awareness of the self-selection issues pertaining to the link between MOE and performance, by first examining the determinants of MOE choice and by offering a template for "what if" analysis that remains an underdeveloped yet critical area for progress in MOE research.

Brouthers' accompanying note (Brouthers, 2013) provides further insight into the intent and contributions of Brouthers (2002), and positions it relative to Brouthers' other work. Below, I will revisit theoretical and methodological aspects of MOE research (and in some cases of IB research more generally), highlighting in places how Brouthers (2002) exemplifies or otherwise informs best practice in such research.

## LAYERS OF THEORY DEVELOPMENT

### From Integration to Synthesis

As the above summary shows, one of Brouthers' (2002) contributions lay in bringing together two theoretical perspectives to explain MOE performance: transaction cost economics and (neo) institutional theory.[2] In the discussion that follows, I read Brouthers' (2002) third explanatory category, "cultural context", to belong conceptually within broader institutional theory; I will return to individual constructs and associated levels below. Brouthers (2013) elaborates in some depth on the fact that these theories were juxtaposed but not made to moderate each other in Brouthers (2002), and points to a possible pathway whereby institutional effects are interacted with transaction cost effects. As such, before turning to the contents of these theories, it is relevant to position Brouthers (2002) among types of theoretical contributions that differ in the extent and manner in which they accrete conceptual elements. This will also set the ground for discussing associated empirical and methodological considerations.

Naturally, in the process of conceptual accretion, explanatory perspectives tend to be juxtaposed before they are brought to bear on each other. Put another way: integration – that is, bringing two or more theories to bear independently on a given phenomenon – precedes synthesis – that is, harnessing one theory to identify the boundaries of another, or even transforming both theories when confronting them.[3] Among papers building on two or more theories in *JIBS*, integration accounted for over two-thirds of research in the three years

surrounding the publication of Brouthers (2002), whereas in the three years that precede its republication alongside this paper, interactive contingencies have grown in popularity to the point of becoming a clear majority of multitheoretical models. Bearing in mind Shaver's (2013) admonition about "the $R^2$ game",[4] synthesis is critical insofar as it helps bound the use of specific theories, and possibly eliminate ineffective ones.

In assessing Brouthers' (2002) past and prospective impact, consider that several forms of contingency modeling – and thus synthesis – may be relevant to IB research. Here I will focus on what are by far the two most common in our field (see Boyd, Haynes, Hitt, Bergh, & Ketchen, 2012): interaction and subgroup analysis. The single most common, interaction analysis, allows one theory to channel another, with the caveat that the identification of which theory acts upon which is not inherently clear from the statistics (although that problem is alleviated in a related methodology, mediation). Recent IB examples include Abdi and Aulakh (2012) and Salomon and Wu (2012). Brouthers (2013) identifies directions for interactions building on the perspectives in Brouthers (2002). However, I see at least as much to build upon in Brouthers (2002) when considering the second most common approach to synthetic contingency theorizing: subgroup analysis, which allows the existence and magnitude of predictors to be compared across two or more contexts. Subgroup analysis is particularly useful for IB research insofar as geographic groupings (such as nations and regions) and possibly organizational groupings provide compelling subgroups. Indeed, this forms the basis of the comparative branch of the field of IB. Subgroup analysis remains seldom used to its full extent in MOE research, partly but not only for lack of data encompassing theoretically driven subgroups.[5]

This matters because contingency approaches differ in the inferences they allow: interaction addresses the form of an effect, while subgroup moderation addresses its strength or degree (Arnold, 1982). For instance, Kotabe, Martin, and Domoto's (2003) split analysis of supplier relationships in the United States and Japan also entails comparisons of the relationships' knowledge contents and their association with time-bound relational assets, subtleties of which would be obscured in interaction analyses but come out in subgroup analysis. It also shows differences in control variables that further motivate splitting the sample rather than using a necessarily limited number of interaction terms. Subgroup analysis, possibly combined with profile- or gestalt-based approaches (Venkatraman, 1989), also represents a compelling solution when it comes to incorporating the multidimensional nature of contingency constructs such as institutional forces.

From this standpoint, besides the potential for interaction analyses discussed in Brouthers (2013), Brouthers (2002) is equally noteworthy in that its sample encompasses 27 host countries, as well as 12 home countries – a rare scope indeed for an organization-level survey. Thus it supports the potential for subgroup analyses too, indeed (and quite exceptionally) on both host- and home-country dimensions. As I will discuss further below, this diversity of home and host countries raises interesting questions about how to model unobserved heterogeneity.

## Combining Theoretical Perspectives

Of course, Brouthers' (2002) impact is also associated with the specific theories it built upon: transaction cost economics and institution theory. Certainly, transaction cost theory and related internalization arguments form the mainstay of research on foreign direct investment in general (Buckley & Casson, 2002; Caves, 2007), and its focus on transaction and firm characteristics makes it a compelling explanation for MOE choices (Dunning & Lundan, 2008; Hennart, 1988). As such, it continues to form the basis of most research on MOE, whether of the integrative or synthesizing type (e.g., Bertrand, 2011; Brouthers & Hennart, 2007; Maekelburger, Schwens, & Kabst, 2012; Zhou & Poppo, 2010). Furthermore, institutional theories have grown to substantial prominence in MOE research. This is due in part to the scope and (sometimes problematic) flexibility of a perspective that, in its sociological branch (following Scott, 1995), encompasses the isomorphic pull of rivals and possibly other firm groupings; and, in both its sociological and economic branches (the latter following North, 1990), encompasses cultural, societal and government influences. Together, these perspectives offer a formidable set of MOE explanations at multiple levels, which recent research continues to draw upon (e.g., Abdi & Aulakh, 2012; Delmestri & Wezel, 2011; Huang, Rode, & Schroeder, 2011).

Yet the theoretical scope of Brouthers (2002) alone hardly suffices to explain its exceptional impact. It is worth considering why. First, several contemporaneous papers offered a similar integration, in some cases proposing a more extensive coverage of Scott's (1995) institutional pillars (Guillén, 2003; Lu, 2002;

Yiu & Makino, 2002). Indeed, as Brouthers (2013) explains, the scope of institutional explanation was intentionally kept at the higher (country rather than country-industry or field) level in Brouthers (2002). Second, compelling an explanation though institutional theory may be, other MOE explanations also imposed themselves during the same period, alongside more established ones such as transaction cost economics. In particular, organizational learning and associated knowledge-based research (in the tradition of Kogut & Zander, 1993) gained extra attention ten years ago (Gaba, Pan, & Ungson, 2002; Lu, 2002, Martin & Salomon, 2003a, b; Pedersen, Petersen, & Sharma, 2003), and remains strongly influential too (e.g., Hashai, 2011; Maekelburger et al., 2012; Salomon & Wu, 2012). MOE research has also been making steadily greater use of real options arguments (e.g., Brouthers, Brouthers, & Werner, 2008; Chi & Seth, 2008; Cuypers & Martin, 2010; Xu, Zhou, & Phan, 2010). Thus one needs to go beyond the specific theoretical perspectives, powerful though they may be, to fully appreciate Brouthers' (2002) contribution.

What was more distinctive about Brouthers (2002) is that it examined determinants of the performance of a specific entry (subsidiary), as well as determinants of the choice of MOE. Among contemporaneous studies using an institutional perspective, this was an exceptional and challenging undertaking. Institutional theory, especially in its sociological branch, brings attention to firm behavior rather than performance – indeed, performance may be deemed altogether irrelevant (Meyer & Zucker, 1989). Meanwhile, from a transaction cost perspective, a plain prediction associating a given entry mode with inferior or superior performance is problematic. The theory presumes that any mode is not inherently inferior or superior, but that this depends on the specificities of the investment, so that the best perfomance will depend on the comparative fit of the modes for the investment in question. In drawing more consistently on the economic branch of institutional theory, and in tackling the equifinality inherent in transaction cost economics, Brouthers (2002) was exemplary in making the best of these theoretical perspectives. Furthermore, this makes it worth considering Brouthers' (2002) contributions from the standpoint of research design, insofar as they addressed the tensions in associating MOE performance with transaction cost theory and institutional theory alike. Accordingly, I will next dis cuss some of that paper's contributions to measurement, and link those alongside theory to its further contributions to the analysis of endogenous MOE choice and performance.

## DESIGNING RESEARCH TO PROBE THE LINK BETWEEN MOE AND PERFORMANCE

### Measurement

Among IB scholars, Brouthers and his co-authors stand out for building a large and coherent research program of MOE research based on original survey data (see also Brouthers, 2013). For this same reason, not all of the measures in Brouthers (2002) are unique to that paper; nevertheless, several of them are noteworthy when it comes to its prospective as well as past impact.

Regarding transaction costs, Brouthers (2002) developed a primary measure consisting of items about the (perceived) costs of search and negotiations, and the costs of making and enforcing contracts, which comes remarkably close to the core (Coasian) concept of transaction cost. Given both the power of direct measures of such costs (Walker & Poppo, 1991), and the importance of taking into account their perceptual component (Williamson, 1975), this measure remains uniquely relevant for IB researchers and beyond. Regarding institutional and environmental effects, in addition to a measure of legal restrictions on the choice of entry mode that again stands out for its closeness to the construct of interest (although it is made up of a single Likert-scale item), Brouthers (2002) included a four-item measure of various country-level risks.[6]

On the outcome side, besides a measure of MOEs that serves as a de-facto first-stage dependent variable, Brouthers (2002) conducted a factor analysis to derive two measures of MOE performance: a factor deemed "financial", encompassing sales, profitability and sales growth; and a "non-financial" factor encompassing market share, marketing, reputation and market access. As I will discuss below, such a distinction is relevant to the study of "what if" scenarios regarding MOE and various dimensions of performance.

### Fit and Performance: The Science and Art of ''What If''

Consistent with IB as a business science, researchers have been drawn to the question of whether the scope of the multinational corporation, and the means thereto (MOEs), are associated with performance. However, making sound inferences about the strategy–performance relationship is hindered by an issue commonly referred to as endogeneity.

Brouthers (2002: 204) was among the first to point this out in *JIBS*, writing that MOE performance studies "typically suffer from an endogeneity problem, i.e., mode performance is compared without regard to the characteristics of the particular investment decision". To be more precise, the most distinctive issue for MOE research is one of self-selection, whereby managers choose an MOE based on characteristics that are expected to affect performance (presumably to maximize said performance), but which are (partly) unobservable to the researcher. The underlying source of endogeneity is thus omitted variables, rather than errors-in-variables or simultaneous causality (Bascle, 2008) – although these too may be of concern.[7]

Statistically, the issue is that if there are unobserved antecedent variables that are associated with both the choice of strategy and the performance outcome, then an uncorrected estimator (such as ordinary least squares) will be inconsistent, and the observed estimate of the effect of strategy on performance will be biased. Even using panel data may not suffice to correct for this, in that fixed effects are helpful only in controlling for unobserved heterogeneity that is not time-varying.[8] Reeb, Sakakibara, and Mahmood (2012) provide a superb overview of this and other endogeneity issues, as well as potential methodological solutions thereto – one extension of which I will expand upon below.[9] First, though, it is important to consider that there is a key theoretical dimension to this problem, and to the associated opportunity.

The challenge of linking strategy or governance decisions to performance is not unique to IB research, nor is the promise of "what if" analysis in addressing it (Durand & Vaara, 2009). Theoretically, the problem with the above (cross-sectional) inference is that it ignores the unique characteristics of a firm or investment, such that the optimal decision for one firm may be different from that of another firm in the same sample. From a transaction cost perspective, in particular, the issue is not that of comparing firm *i*'s choice $A_i$ with firm *j*'s choice $B_j$, for a *ceteris paribus* condition cannot be presumed to hold in such a comparison. Rather, the question is how firm *i* would fare with choice $A_i$ compared with its own alternative choice $B_i$. That is, the counterfactual is not how *another* firm would fare using a different MOE, but rather how the *same* firm would. As Masten (2002: 430–431) cogently put it:

> The literature on firm performance cannot sustain generalizations about the direction, much less the magnitude, of the effects of organizational form on performance. A problem … is that this research ends up answering the question "How does the performance of firms that adopt a particular governance arrangement compare to that of firms that adopt alternatives to that arrangement?" when the correct question, from a governance-choice perspective, is "How does the performance of a firm that adopted a particular arrangement compare with how that same firm would have performed had it adopted an alternative?"

This same theoretical issue was identified for IB research by Caves (1998). However, whereas most treatments outside IB focus at least implicitly on heterogeneity in firm characteristics, Caves pointed to the extra complexity in assessing heterogeneous environments – that is, the fact that the comparison may be hindered not only because firms differ, but because the specifics of the choices they face also differ in complex ways across national or regional environments. That is, heterogeneity resides not just in firm characteristics, but also in the choices they face:

> Managers try to improve on random choices and make the best decision contingent on the constraints and opportunities facing the firm, and their efforts tend to trip up the researcher who would "second-guess" the policy choice. Policy A might be the best for a firm stuck with an inferior set of opportunities; policy B may be a viable but not ideal choice for a firm blessed with good opportunities. The investigator who does not control for the firms' different opportunities concludes that policy B beats policy A, whereas the short-changed firms are those that chose B (Caves, 1998: 6–7).

The point, then, is – as Brouthers (2002: 204) put it – one of "comparing the financial and non-financial performance of mode choices that are predicted by the extended transaction cost model with the performance of other mode choices". The challenge therein is that we observe only one choice by a given firm (in the sense of the MOE for a given investment), and do not observe the alternative. However, theory can help us specify which choice makes most sense, based on the available information. Returning to methods, two subtly different approaches to this issue have been used. Both involve two stages, with the first-stage modeling MOE choice and the second stage incorporating information from this first stage into the performance model. I start by describing the approach taken by Brouthers (2002), and then compare it with that taken by Shaver (1998). I focus on these two approaches, rather than alternatives described by Reeb et al. (2012), because they specifically address cases where the first-stage choice is polychotomous. This includes the dichotomous

representations (binary choices) that are most common in MOE research.

Brouthers (2002) modeled the MOE choice via a logistic regression; used this first stage to obtain predicted values (on a 0–1 scale) of either MOE under consideration; and then incorporated into the second-stage regression (presumably an OLS model) a dummy indicating whether the observed first-stage value fit the predicted MOE.[10] The take-away from this is, for each of the two performance variables, an estimate of the effect of "entry mode fit" (Brouthers, 2002: Table 3). By contrast, Shaver (1998) employed a version of Heckman's (1979) method (see Lee, 1983, and Greene, 2011). This uses a probit to model the first-stage choice, in this case of (binary) MOE. A transformation of the first-stage predicted probability (the inverse Mills ratio or an extension thereof, typically labeled $\lambda$ and referred to as the self-selection parameter) is then included as a predictor in the second stage. It is also possible to restrict the sample to either MOE while still including the self-selection parameter in the second stage, thus generating one set of coefficients per choice (Shaver, 1998: Table 3). Finally, it is possible to evaluate the consequences of each choice by multiplying the observed values of independent variables by each into the sets of coefficients just mentioned, and thus to compare the performance of firms that chose mode A with the performance that these same firms would have achieved *had they chosen mode B instead*, and likewise to compare the performance of firms that chose mode B with the performance that these same firms would have achieved *had they chosen mode A instead*. Figure 1(a) provides a general representation of Shaver's (1998: Table 4) method in this respect, while Figure 1(b) offers a variant of this approach based on first-stage fit. The latter is akin in spirit to Brouthers' use of his first stage to measure entry-mode fit, and can also be practiced with Heckman-based approaches (e.g., Masten, 1993).[11]

Comparing Brouthers' (2002) approach with Heckman-based approaches such as Shaver's (1998) is interesting on empirical grounds, as well as on theoretical and methodological grounds. Remember that the purpose of these approaches is initially methodological, that is, to avoid bias due to self-selection, but that I argued that they also have relevance from a theoretical standpoint, in addressing the "what if" inherent in comparative governance theories such as transaction cost economics.

In terms of their frequency of use to deal with potential self-selection bias, there is a striking

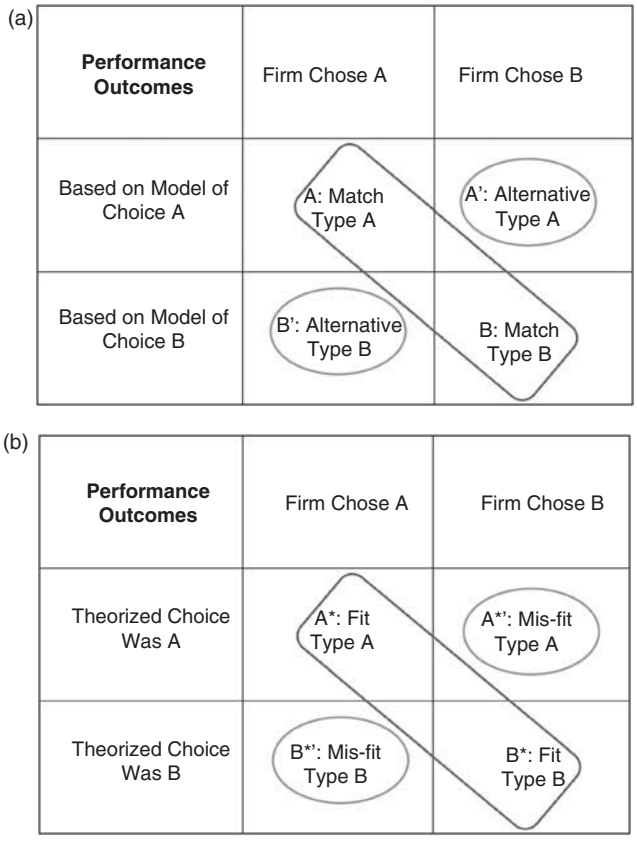


**Figure 1** Two representations of "what if" analysis: (a) comparison of chosen vs alternative strategies (e.g., Shaver, 1998); (b) comparison of fit vs misfit strategies (e.g., Masten, 1993).

difference. Brouthers and his co-authors remain the only authors to have made use of a methodology such as Brouthers' (2002) in *JIBS*, and that methodology is seldom used by other authors in other IB journals either. By contrast, as of writing, Heckman-based methods have been used in 35 *JIBS* papers dealing with a variety of topics, and indeed their use increased markedly in the last decade (e.g., Cui & Jiang, 2012; Gu & Lu, 2011; Laamanen, Simula, & Torstila, 2012). When it comes to controlling for self-selection, the Heckman-based approach has one major advantage: the self-selection parameter that gets carried into the second stage serves to ensure a quasi-simultaneity in estimation that strengthens the method's ability to address self-selection bias. To attain the same benefit, the first stage in Brouthers' approach would need to be perfectly estimated, which rather contradicts the shared assumption that some of the observed choices are suboptimal (Caves, 1998; Masten, 2002; Shaver, 2013). Conversely, one constraint in using Heckman-based approaches is that they require finding an

exclusion restriction (i.e., an instrument) that predicts the first stage but is not associated with the second stage. Even then, a strong instrument is less imperative when using the Heckman model than when using alternative instrumental variable approaches (Bascle, 2008); indeed the Heckman model could be estimated absent an instrument, based on the nonlinearity of the inverse Mills ratio, although it is much preferable to have an exclusion restriction. In terms of interpretation, even aside from "what if" considerations, an advantage of Heckman-based approaches is that second-stage results can be compared with and without including the self-selection parameter. From this standpoint, compelling advances in MOE and other IB research are found in papers that report different results after controlling for self-selection (in particular Dastidar, 2008; Shaver, 1998).[12]

When it comes to the use of these methods to obtain "what if" insights into the theoretical challenges of associating MOE with performance, the picture is rather different. Studies in related fields have reported Heckman-based comparisons of various governance choices: acquisition vs greenfield entry (Shaver, 1998); equity joint venture vs non-equity alliance (Sampson, 2004); and several instances of make or buy (Leiblein, Reuer, & Dalsace, 2002; Masten, 1993; Mayer & Nickerson, 2005). Of those, only Shaver (1998) acknowledges an IB foundation, as does one paper on a related topic, the effect of subsidiary mandate on R&D intensity (Cantwell & Mudambi, 2005). Noticeably, such Heckman-based work is absent from the pages of *JIBS*. By contrast, Brouthers has contributed consistently to this line of analysis, including in *JIBS* (Brouthers, 2002; Brouthers, Brouthers, & Werner, 1999). Brouthers' work (and that of his co-authors) thus stands out for consistently addressing the counterfactual of the same firm's potential performance under an alternative strategy, albeit in the form of addressing the consequences of a misfit in the MOE choice (i.e., the version in Figure 1(b)).

It is also relevant to compare the ways in which these approaches allow insight into the MOE-performance relationship. Each of Brouthers' (2002: Table 3) estimates can be understood as the average effect of fit (or as he coded it misfit), and thus a demonstration that an MOE choice that fits generally outperforms one that does not. This comparison, however, does not distinguish between cases where the optimal choice is one entry mode vs the other (in the case of Brouthers, 2002, wholly owned vs shared ownership). Put more generally, this analysis does not allow comparison between one governance error (choosing mode A when the firm should have chosen mode B) and its opposite (choosing B when the firm should have chosen A). By contrast, Heckman-based papers that have explored the same-firm counterfactual have reported different effects based on one choice vs the other (Shaver, 1998, as in my Figure 1(a)) or between one type of misfit and the other (e.g., Sampson, 2004, as in my Figure 1(b)); indeed, many have shown substantive asymmetries in the costs of (wrongly) choosing one MOE vs the other. This approach thus provides extra precision in analysis, and informs recommendations not only about the pros and cons of each MOE when chosen optimally, but also about the respective risks associated with mistakenly choosing each alternative.

Although it is theoretically possible to check for asymmetric performance effects of this kind by extending Brouthers' (2002) approach, there are several other interpretation advantages with Heckman-based models. First, the interpretation of the effect of fit is not only more robust if the first-stage assumptions are met, but also more complete. Consider now how the two coefficients in the split analysis can be interpreted simultaneously. If both coefficients indicate a superior outcome under the focal choice than the alternative, that is, $A-A'>0$ and $B-B'>0$ in Figure 1(a) (or equivalently $A^*-A^{*\prime}>0$ and $B^*-B^{*\prime}>0$ in Figure 1(b), albeit subject to the quality of the model used to determine fit), then there is a situation of *comparative advantage*. By contrast, if firms that chose one strategy would have outperformed the other firms regardless (i.e., both A and A* exceed both B and B*, or vice versa), then there is *absolute advantage* (Hamilton & Nickerson, 2003).[13] These scenarios, in turn, are associated with respectively weaker and stronger asymmetries between one type of error (choosing A over B) and the other.

Second, by including the self-selection parameter in the separate second-stage Heckman-based regressions based on choice, clues for further research can be obtained. Shaver (1998) states that the sign of the self-selection parameter is a function of the correlation between unobservables (i.e., the correlation between error terms) of the two stages. Thus a positive (negative) coefficient indicates that unobservables that affect the decision (the first-stage) in one direction affect performance (the second stage) in the same (opposite) direction. For instance, the negative coefficient in column 5 of Shaver's

(1998) Table 3 implies that unobservables that encourage acquisition are associated with lower performance (survival). Indeed, there are plausible – if hard-to-measure – potential explanations for this, such as pertaining to information asymmetry or perhaps hubris (Hayward & Hambrick, 1997; Sirower, 1997). On the other hand, absence of significance of the self-selection parameter in the overall or split second-stage regressions cannot be interpreted in a simple way as proof that there is no self-selection, let alone as proof that any endogeneity concern is absent; alternative explanations include imperfections of the first stage, correlation of the self-selection parameter with observed as well as unobserved measures, and even the reduced sample sizes inherent in split analyses.

Third, these distinctions help inform research into transaction cost and other theories of comparative governance that hinge on the counterfactual of a given firm's potential performance under one MOE vs another MOE. They allow us to understand why in some cases (typically, absolute advantage) one entry mode may seem to outperform the other before self-selection is controlled for; yet some (weaker) firms would be better off choosing the alternative. Likewise, this explains why even when there is no apparent difference before controlling for self-selection (as might in particular happen with comparative advantage), the choice of strategy may be thoroughly important at the firm level. In both cases, substantive differences may arise with either "what if" representation (Figure 1(a) or Figure 1(b)). These distinctions are also relevant to the stream of research in IB that takes an evolutionary as well as an institutional perspective (e.g., Cantwell, Dunning, & Lundan, 2010 ; Kogut & Zander, 1993; Martin, Swaminathan, & Mitchell, 1998; Nachum & Song, 2011). They help explain whether one might expect a relatively rapid convergence (in the case of absolute advantage) or conversely no convergence (in the case of comparative advantage) towards one MOE, and the rate at which one subpopulation of firms may grow relative to another – depending on firm characteristics as they match onto governance options, but also on rates of mistakes in choosing MOEs and on how strong selection pressures are.

Having discussed the opportunities for "what if" analyses to contribute to the advancement of theory in IB and related fields such as strategy, I now return to two latent contributions of Brouthers (2002), given these opportunities. The first has to do with dependent variables. So far the literature has discussed asymmetry in the effects of governance choices and mistakes in terms of the magnitude of one outcome variable. Yet, theoretically, there is no reason to expect that the magnitude or even direction of any asymmetry would be the same for various dependent variables. Consider the choice between wholly and jointly owned subsidiary, as in Brouthers (2002), for instance. This decision has bearing on the amount of control as well as exposure to partner, on one hand (Chi & Roehl, 1997), but also on access to local partner resources, often pertaining to local distribution (Hennart, 2009), on the other. Thus, depending on a foreign investor's capabilities and needs, a decision that imparts complete ownership but forgoes local partnership should be more harmful in terms of local market access, whereas a joint venture may hamper control and limit share of returns. To some extent, these costs of MOE misalignment map onto Brouthers' (2002) "non-financial" and "financial" performance constructs, respectively. These performance distinctions can be refined and extended. I would expect the timeframe for performance effects to be longer when it comes to loss of controls or assets than when it comes to lack of immediate market presence. The level at which these effects manifest themselves should vary, too: I would expect loss of technological knowledge to eventually affect the whole parent company (notwithstanding possible countervailing arrangements such as suggested by Zhao, 2006), while a failure to find a local marketing partner should foremost affect the local subsidiary. I return to the implications of this latter level issue below. It remains that Brouthers' (2002) distinction between dimensions of performance, and his discussion of efficiency and value enhancement motives, should inform future research that theorizes asymmetric consequences of MOE choice and (mis)fit (see also Anderson & Dekker, 2005).

Another way in which Brouthers' (2002) research design remains exemplary for "what if" research becomes apparent when we return to Caves' (1998) emphasis on local opportunities as a source of potential heterogeneity. Indeed, when considering the potential of two-stage procedures such as Heckman's, Caves considered that "This design unfortunately is hard to implement in research on IB, where firms' opportunity sets are hard to define and characterize accurately and likely to be highly heterogeneous" (1998: 7). To the extent that this challenge arises, it also represents an opportunity for IB researchers, who may use institutional and other constructs to advance the understanding of such

opportunity sets. Not least, such an endeavor will benefit from research designs that are rich enough to allow cross-country comparisons and in particular subgroup analyses – such as Brouthers' (2002).

Having addressed how IB scholars can draw upon research such as Brouthers' to design studies that not only address endogeneity, but also make both theoretical and empirical contributions to the comparative study of MOEs, I will next briefly address three further boundaries where theory should either promote or benefit from advances in research design.

## THREE FURTHER RESEARCH BOUNDARIES

Returning first to the combining of theory, a starting point is that a single theory study tends to be incomplete in dealing with alternative explanations – something that is especially critical by dint of the multifaceted context and decision set for MOE and other IB research (Martin, Swaminathan, & Tihanyi, 2007). Yet bringing multiple theories to bear also entails extra attention to the level at which each theory operates. Consider the combination found in Brouthers (2002), among others: transaction cost economics operates at the firm or ideally even the eponymous transaction level (see Hennart, 1991), whereas institutional theory operates at the country level (and, in some versions, at the industry or organizational field level). Studies that use explanatory variables at multiple levels should be informed by multilevel methodology (such as hierarchical linear modeling); this is especially so of studies that include theory synthesis as I discussed above, and thus generate cross-level effects (Arregle, Hébert, & Beamish, 2006; Peterson, Arregle, & Martin, 2012). However, only some versions of instrumental variables methodology have been worked out with multilevel applications so far (see Abdi & Aulakh, 2012); implementations with a binary first step and specifically in a Heckman framework remain econometrically unproven (Rabe-Hesketh, Skrondal, & Pickles, 2002). Advances in this area would enable stronger integration of theory and methods in MOE and other IB and strategy research.

Second, as discussed above, taking care of endogeneity is not just a methodological issue, but also one of theoretical attention and specification. In particular, apparent effects may turn out to be spurious and shown to be no longer significant after correcting for self-selection (e.g., Leiblein et al., 2002; Shaver, 1998). As such, this approach can also be a means of pruning theory by identifying predictions that do not hold, or hold only spuriously (Leavitt, Mitchell, & Peterson, 2010). However, finding an effect to be non-significant does not allow the conclusion that the absence of an effect has been "proven". A set of dedicated steps and methods is required to demonstrate that an effect is indeed non-existent (or sufficiently trivial) with a level of confidence that matches that used in conventional testing *away* from the null hypothesis. Cuypers and Martin (2010) demonstrate such a methodology in IB research; but again, integration with a Heckman analysis remains incomplete.

Third, so far in this paper the concept of MOE has been defined broadly. Various studies encompass wholly owned vs joint venture (Brouthers, 2002) and acquisition vs greenfield subsidiary (Shaver, 1998), but also licensing and exporting (e.g., Martin & Salomon, 2003a), equity joint venture vs non-equity alliance (Sampson, 2004), etc. MOE researchers commonly reduce the range of MOEs to a binary choice in the interest of modeling that choice, whether by pooling some choices (joint ventures, licenses and other types of contract vs wholly owned subsidiaries in Kogut & Zander, 1993) or by eliminating some observations (licensing and exporting in Brouthers, 2002). This leaves the theory and interpretation contingent on the heterogeneous aggregation or exclusion of some MOEs. Furthermore, some MOEs are not mutually exclusive; in particular, a wholly owned subsidiary may be either an acquisition or a greenfield entry (Slangen & Hennart, 2008), as might a joint venture for that matter. Brouthers and Hennart (2007), among others, labeled the acquisition–greenfield distinction one of "mode of establishment"; but that terminology is far from commonly accepted (e.g., Harzing, 2002; Lee & Lieberman, 2010), and even research that incorporates the distinction has reduced the empirical analysis to binary dependent variables (Dikova & van Witteloostuijn, 2007; Slangen & Hennart, 2008). However, this limitation may be relaxed by using a multinomial model of MOEs (e.g., Chang & Rosenzweig, 2001),[14] which in turn is also increasingly compatible with the "what if" discussion above. Although a binary specification is convenient when modeling the first stage of a Heckman-based estimation, several multinomial extensions of the Heckman first stage have been proposed. Among those, Lee's (1983) is much the most commonly used in business research, yet evidence has accumulated that alternatives are more robust (Bourguignon, Fournier, & Gurgand,

2007; Schmertmann, 1994). The assumption of independence of irrelevant alternatives remains a major hurdle to potential uses of multinomial logit choice models in MOE research, since it is to be presumed that decision-makers parse through alternatives carefully. Nevertheless, this represents one area where progress is being made that will also allow generalized Heckman-based estimations encompassing a broader range of MOEs than hitherto studied.

At this juncture, though, the burden returns to theory, as the researcher should first specify in what way the inclusion of extra MOEs in the analysis changes the base comparison and otherwise sheds insight, such as on the cross-sectional or longitudinal interdependence among MOE choices (Shaver, 2013). Given the prominence of debates such as whether alliances should be considered as an intermediate mode between hierarchy (wholly owned subsidiary) and market (contract or licensing) or conversely be considered as a perpendicular alternative operating under different governance conditions (Hennart, 1993; Powell, 1987; Williamson, 1991), I believe that compelling opportunities still exist for MOE research, and that such progress stands to inform IB and strategy research more generally.

## CONCLUSION

I have argued that Brouthers' (2002) contributions can be seen as multifaceted: furthering the analysis of the effects of mode of MOE choice on performance (and of their joint antecedents); contributing to the rise of institutional theory in IB research; proposing several measurement advances, including regarding dimensions of performance; and bringing attention to the self-selection of MOEs and the associated research opportunities. If some of my commentary has emphasized methodological progress and prospects, it is because methods serve as a bridge between theory and empirics, and link them in the cyclical process of scientific development (Runkel & McGrath, 1972). Thus I argued that some of Brouthers' (2002) theoretical arguments opened up methodological and empirical avenues, and likewise some of his research design choices can inspire fresh theorizing and empirics about MOEs, and indeed about international strategy more generally (see also Kalnins, 2007). This set of contributions marks Brouthers (2002) as a worthy *JIBS* Decade Awardee well beyond 2012 – congratulations, Keith! – and also demonstrates how entry mode research can remain a potent area for the advancement of scholarship in IB and strategy.

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## NOTES

[1]By modes of entry, I mean all possible means of expanding into a foreign market. The studies discussed here typically focus on a binary choice such as wholly owned vs jointly owned (Brouthers, 2002) or acquisition vs greenfield entry (Shaver, 1998). MOEs also include licensing and exporting (e.g., Martin & Salomon, 2003a). In the penultimate section of this paper, I return to the challenges that arise when considering the diversity and potential combinations of MOEs.

[2]I refer by "theoretical perspective", or "theory" in short, to a coherent set of concepts and assumptions that has achieved sufficient paradigmatic recognition to have both theoretical weight and meaning as a commonly understood perspective. While this provides convenient shorthand in academic debate, it remains that the development of specific refutable hypotheses from such a theory requires researchers to explicate causal linkages specific to their topic (Thomas, Cuervo-Cazurra, & Brannen, 2011).

[3]It is of course possible, and not uncommon, to combine types and forms of theorizing. Thus Lu (2002) integrates transaction cost and institutional arguments, and adds an experiential contingency on institutional effects. As another example, Martin and Salomon (2002, 2003b) create a functional synthesis of internalization and knowledge-based arguments depending on tacitness, and then develop a further contingency analysis based on firm capabilities, presented via subgroup representation (see below).

[4]Also, *JIBS* editors have duly advised on the need for rigor in combining theory (Bello & Kostova, 2012; Cheng, Henisz, Roth, & Swaminathan, 2009).

[5]It is of course common and often proper to conduct an interaction analysis, and then ascertain the robustness and perhaps the directionality of the results though subgroup analysis. Here, I focus on maximizing the insights from either approach and in particular from subgroup analysis. This does not preclude cumulating

the two approaches, but entails that each method be used to its full potential. Furthermore, subgroup analysis is compelling for certain nonlinear estimators, where the interpretation of interaction terms is fraught (e.g., Penner-Hahn & Shaver, 2005).

[6]The latter measure is not exclusively an institutional variable, as Brouthers (2002) recognized in classifying his independent variables. However, elements of (perceived) risk from cultural, political, social and economic conditions are now acknowledged to be intrinsic components of the institutional environment (Martin, Salomon, & Wu, 2010).

[7]As Bascle (2008) points out, if the source of endogeneity is errors-in-variables or simultaneous causation, then the researcher should consider instrumental variable methods other than the Heckman approach and its derivatives, on which I focus below.

[8]Reeb et al. (2012) point to a related concern with fixed effects: if unobserved heterogeneity is associated with time-invariant or slow-changing phenomena of interest, then the fixed effects absorb the relevant variance and thus impede studying it. I would add that this might be avoided where the variance in question is at a level that can be used for subgroup analysis (see also Peterson et al., 2012).

[9]Reeb et al. (2012) do not specifically discuss the Heckman method, but as described below it can be considered a form of instrumental variable approach (see also Bascle, 2008).

[10]In a related approach, Aulakh and Kotabe's (1997) study of international channel integration employed a first-stage logit (of the multinomial and ordered kind, which I return to below) and made insightful use of a MANOVA to show both the irrelevance of choices as such, and the relevance of predicted fit.

[11]The representation in Figure 1(b) would require a different split than Shaver's (1998), based on *inferred* optimal choices rather than observed choices. As such its interpretation is less straightforward, and subject to the ambiguities of finding a proper cutoff. Sampson (2004: Table 8) illustrates this approach. I present Figure 1(b) here to facilitate the comparison with Brouthers and the theoretical discussion to follow.

[12]For this reason, space considerations allowing, it is desirable to report on the impact of adding the self-selection parameter in greater detail. Some applications of the Heckman correction may appear to add little value – for instance, Krishnan, Martin, and Noorderhaven (2006) had to report a first-stage and Heckman correction for an MOE variable that was but a control variable, and an insignificant one at that, in the performance model of interest. However, for the most part *JIBS* authors and reviewers are prone to err in the opposite direction, with many papers providing few or even no details about how the endogeneity correction was implemented.

[13]The apparent overall effect in terms of (mis)fit, as in Figure 1(b), would depend on the proportions of firms making each type of mistake. The preceding quote by Caves (1998) corresponds to a case of absolute advantage, assuming that firms with weak opportunities and firms with strong opportunities would both be better off with "policy A".

[14]An ordered probit (or logit) could apply where choices so fit. So might a nested logit. Where predictors are characteristics of the choice rather than (or in addition) of the chooser, a conditional model is relevant, although the conditional probit is less well developed computationally than the conditional logit.

## REFERENCES

Abdi, M., & Aulakh, P. S. 2012. Do country-level institutional frameworks and interfirm governance arrangements substitute or complement in international business relationships? *Journal of International Business Studies*, 43(5): 477–497.

Anderson, S. W., & Dekker, H. C. 2005. Management control for market transactions: The relation between transaction characteristics, incomplete contract design, and subsequent performance. *Management Science*, 51(12): 1734–1752.

Arnold, H. J. 1982. Moderator variables: A clarification of conceptual, analytic, and psychometric issues. *Organizational Behavior and Human Performance*, 29(2): 143–174.

Arregle, J.-L., Hébert, L., & Beamish, P. 2006. Mode of international entry: The advantages of multilevel methods. *Management International Review*, 46(5): 597–618.

Aulakh, P. S., & Kotabe, M. 1997. Antecedents and performance implications of channel integration in foreign markets. *Journal of International Business Studies*, 28(1): 145–175.

Bascle, G. 2008. Controlling for endogeneity with instrumental variables in strategic management research. *Strategic Organization*, 6(3): 285–327.

Bello, D. C., & Kostova, T. 2012. From the Editors: Conducting high impact international business research: The role of theory. *Journal of International Business Studies*, 43(6): 537–543.

Bertrand, O. 2011. What goes around, comes around: Effects of offshore outsourcing on the export performance of firms. *Journal of International Business Studies*, 42(2): 334–344.

Bourguignon, F., Fournier, M., & Gurgand, M. 2007. Selection bias corrections based on the multinomial logit model: Monte Carlo comparisons. *Journal of Economic Surveys*, 21(1): 174–205.

Boyd, B. K., Haynes, K. T., Hitt, M. A., Bergh, D. D., & Ketchen, D. J. 2012. Contingency hypotheses in strategic management research: Use, disuse, or misuse? *Journal of Management*, 38(1): 278–313.

Brouthers, K. D. 2002. Institutional, cultural and transaction cost influences on entry mode choice and performance. *Journal of International Business Studies*, 33(2): 203–221.

Brouthers, K. D. 2013. A retrospective on: Institutional, cultural and transaction cost influences on entry mode choice and performance. *Journal of International Business Studies*, 44(1): 14–22.

Brouthers, K. D., & Hennart, J.-F. 2007. Boundaries of the firm: Insights from international entry mode research. *Journal of Management*, 33(3): 395–425.

Brouthers, K. D., Brouthers, L. E., & Werner, S. 2008. Real options, international entry mode choice and performance. *Journal of Management Studies*, 45(5): 936–960.

Brouthers, L. E., Brouthers, K. D., & Werner, S. 1999. Is Dunning's eclectic framework descriptive or normative? *Journal of International Business Studies*, 30(4): 831–844.

Buckley, P. J., & Casson, M. C. 2002. *The future of the multinational enterprise* (25th anniversary edn). Basingstoke: Palgrave Macmillan.

Cantwell, J., & Mudambi, R. 2005. MNE competence-creating subsidiary mandates. *Strategic Management Journal*, 26(12): 1109–1128.

Cantwell, J., Dunning, J. H., & Lundan, S. M. 2010. An evolutionary approach to understanding international business activity: The co-evolution of MNEs and the institutional environment. *Journal of International Business Studies*, 41(4): 567–586.

Caves, R. E. 1998. Research in international business: Problems and prospects. *Journal of International Business Studies*, 29(1): 5–19.

Caves, R. E. 2007. *Multinational enterprise and economic analysis* (3rd edn). Cambridge: Cambridge University Press.

Chang, S. J., & Rosenzweig, P. M. 2001. The choice of entry mode in sequential foreign direct investment. *Strategic Management Journal*, 22(8): 747–776.

Cheng, J. L. C., Henisz, W. J., Roth, K., & Swaminathan, A. 2009. From the Editors: Advancing interdisciplinary research in the field of international business: Prospects, issues and challenges. *Journal of International Business Studies*, 40(7): 1070–1074.

Chi, T., & Roehl, T. W. 1997. The structuring of interfirm exchanges in business know-how: Evidence from international collaborative ventures. *Managerial and Decision Economics*, 18(4): 279–294.

Chi, T., & Seth, A. 2008. A dynamic model of the choice of mode for exploiting complementary capabilities. *Journal of International Business Studies*, 40(3): 365–387.

Cui, L., & Jiang, F. 2009. FDI entry mode choice of Chinese firms: A strategic behavior perspective. *Journal of World Business*, 44(4): 434–444.

Cui, L., & Jiang, F. 2012. State ownership effect on firms' FDI ownership decisions under institutional pressure: A study of Chinese outward-investing firms. *Journal of International Business Studies*, 43(3): 264–284.

Cuypers, I. R. P., & Martin, X. 2010. What makes and what does not make a real option? A study of equity shares in international joint ventures. *Journal of International Business Studies*, 41(1): 47–69.

Dastidar, P. 2008. International corporate diversification and performance: Does firm self-selection matter? *Journal of International Business Studies*, 40(1): 71–85.

Delmestri, G., & Wezel, F. C. 2011. Breaking the wave: The contested legitimation of an alien organizational form. *Journal of International Business Studies*, 42(6): 828–852.

Demirbag, M., Tatoglu, E., & Glaister, K. 2008. Factors affecting perceptions of the choice between acquisition and greenfield entry: The case of Western FDI in an emerging market. *Management International Review*, 48(1): 5–38.

Dikova, D., & van Witteloostuijn, A. 2007. Foreign direct investment mode choice: Entry and establishment modes in transition economies. *Journal of International Business Studies*, 38(6): 1013–1033.

Dunning, J. H., & Lundan, S.M. 2008. *Multinational enterprises and the world economy* (2nd edn). Cheltenham: Edward Elgar.

Durand, R., & Vaara, E. 2009. Causation, counterfactuals, and competitive advantage. *Strategic Management Journal*, 30(12): 1245–1264.

Gaba, V., Pan, Y., & Ungson, G. R. 2002. Timing of entry in international market: An empirical study of US Fortune 500 firms in China. *Journal of International Business Studies*, 33(1): 39–55.

Greene, W. H. 2011. *Econometric analysis* (7th edn). Upper Saddle River, NJ: Prentice Hall.

Gu, Q., & Lu, J. W. 2011. Effects of inward investment on outward investment: The venture capital industry worldwide 1985–2007. *Journal of International Business Studies*, 42(2): 263–284.

Guillén, M. F. 2003. Experience, imitation, and the sequence of foreign entry: Wholly owned and joint-venture manufacturing by South Korean firms and business groups in China, 1987–1995. *Journal of International Business Studies*, 34(2): 185–198.

Hamilton, B. H., & Nickerson, J. A. 2003. Correcting for endogeneity in strategic management research. *Strategic Organization*, 1(1): 51–78.

Harzing, A.-W. 2002. Acquisitions versus greenfield investments: International strategy and management of entry modes. *Strategic Management Journal*, 23(3): 211–227.

Hashai, N. 2011. Sequencing the expansion of geographic scope and foreign operations by "born global" firms. *Journal of International Business Studies*, 42(8): 995–1015.

Hayward, M. L. A., & Hambrick, D. C. 1997. Explaining the premiums paid for large acquisitions: Evidence of CEO hubris. *Administrative Science Quarterly*, 42(1): 103–127.

Heckman, J. J. 1979. Sample selection bias as a specification error. *Econometrica*, 47(1): 153–161.

Hennart, J.-F. 1988. A transaction costs theory of equity joint ventures. *Strategic Management Journal*, 9(4): 361–374.

Hennart, J.-F. 1991. The transaction-costs theory of joint ventures: An empirical study of Japanese subsidiaries in the United States. *Management Science*, 37(4): 483–497.

Hennart, J.-F. 1993. Explaining the swollen middle: Why most transactions are a mix of "market" and "hierarchy". *Organization Science*, 4(4): 529–547.

Hennart, J.-F. 2009. Down with MNE-centric theories! Market entry and expansion as the bundling of MNE and local assets. *Journal of International Business Studies*, 40(9): 1432–1454.

Huang, X., Rode, J. C., & Schroeder, R. G. 2011. Organizational structure and continuous improvement and learning: Moderating effects of cultural endorsement of participative leadership. *Journal of International Business Studies*, 42(9): 1103–1120.

Hult, G. T. M., Ketchen Jr., D. J., Griffith, D. A., Chabowski, B. R., Hamman, M. K., Dykes, B. J., Pollitte, W. A., & Cavusgil, S. T. 2008. An assessment of the measurement of performance in international business research. *Journal of International Business Studies*, 39(6): 1064–1080.

Kalnins, A. 2007. Sample selection and theory development: Implications of firms' varying abilities to appropriately select new ventures. *Academy of Management Review*, 32(4): 1246–1264.

Kogut, B., & Zander, U. 1993. Knowledge of the firm and the evolutionary theory of the multinational corporation. *Journal of International Business Studies*, 24(4): 625–645.

Kotabe, M., Martin, X., & Domoto, H. 2003. Gaining from vertical partnerships: Knowledge transfer, relationship duration and supplier performance improvement in the US and

Japanese automotive industries. *Strategic Management Journal*, 24(4): 293–316.
Krishnan, R., Martin, X., & Noorderhaven, N. G. 2006. When does trust matter to alliance performance? *Academy of Management Journal*, 49(5): 894–917.
Laamanen, T., Simula, T., & Torstila, S. 2012. Cross-border relocations of headquarters in Europe. *Journal of International Business Studies*, 43(2): 187–210.
Leavitt, K., Mitchell, T. R., & Peterson, J. 2010. Theory pruning: Strategies to reduce our dense theoretical landscape. *Organizational Research Methods*, 13(4): 644–667.
Lee, G. K., & Lieberman, M. B. 2010. Acquisition vs internal development as modes of market entry. *Strategic Management Journal*, 31(2): 140–158.
Lee, L.-F. 1983. Generalized econometric models with selectivity. *Econometrica*, 51(2): 507–512.
Leiblein, M. J., Reuer, J. J., & Dalsace, F. 2002. Do make or buy decisions matter? The influence of organizational governance on technological performance. *Strategic Management Journal*, 23(9): 817–833.
Lu, J. W. 2002. Intra- and inter-organizational imitative behavior: Institutional influences on Japanese firms' entry mode choice. *Journal of International Business Studies*, 33(1): 19–37.
Maekelburger, B., Schwens, C., & Kabst, R. 2012. Asset specificity and foreign market entry mode choice of small and medium-sized enterprises: The moderating influence of knowledge safeguards and institutional safeguards. *Journal of International Business Studies*, 43(5): 458–476.
Martin, X., & Salomon, R. 2002. Knowledge transfer capacity and cooperative strategies: When should firms leverage tacit knowledge through licensing and alliances? In F. J. Contractor & P. Lorange (Eds), *Cooperative strategies and alliances*: 729–750. Amsterdam and New York: Pergamon/Elsevier Science.
Martin, X., & Salomon, R. 2003a. Knowledge transfer capacity and its implications for the theory of the multinational corporation. *Journal of International Business Studies*, 34(4): 356–373.
Martin, X., & Salomon, R. 2003b. Tacitness, learning and international expansion: A study of foreign direct investment in a knowledge-intensive industry. *Organization Science*, 14(3): 297–311.
Martin, X., Swaminathan, A., & Mitchell, W. 1998. Organizational evolution in an interorganizational environment: Incentives and constraints on international expansion strategy. *Administrative Science Quarterly*, 43(3): 566–601.
Martin, X., Swaminathan, A., & Tihanyi, L. 2007. Modeling international expansion. In D. J. Ketchen & D. D. Bergh (Eds), *Research methodology in strategy and management*: 103–119. Amsterdam: Elsevier.
Martin, X., Salomon, R. M., & Wu, Z. 2010. The institutional determinants of agglomeration: A study in the global semiconductor industry. *Industrial and Corporate Change*, 19(6): 1769–1800.
Masten, S. E. 1993. Transaction costs, mistakes, and performance: Assessing the importance of governance. *Managerial and Decision Economics*, 14(2): 119–129.
Masten, S. E. 2002. Modern evidence on the firm. *American Economic Review (AEA Papers and Proceedings)*, 92(2): 428–432.
Mayer, K. J., & Nickerson, J. A. 2005. Antecedents and performance implications of contracting for knowledge workers: Evidence from information technology services. *Organization Science*, 16(3): 225–242.
Meyer, M. W., & Zucker, L. G. 1989. *Permanently failing organizations*. Newbury Park, CA: Sage.
Nachum, L., & Song, S. 2011. The MNE as a portfolio: Interdependencies in MNE growth trajectory. *Journal of International Business Studies*, 42(3): 381–405.
North, D. C. 1990. *Institutions, institutional change and economic performance*. Cambridge: Cambridge University Press.
Pedersen, T., Petersen, B., & Sharma, D. 2003. Knowledge transfer performance of multinational companies. *Management International Review*, 43(Special issue 3): 69–90.
Penner-Hahn, J., & Shaver, J. M. 2005. Does international research and development increase patent output? An analysis of Japanese pharmaceutical firms. *Strategic Management Journal*, 26(2): 121–140.
Peterson, M. F., Arregle, J.-L., & Martin, X. 2012. Multilevel models in international business research. *Journal of International Business Studies*, 43(5): 451–457.
Powell, W. W. 1987. Hybrid organizational arrangements: New forms or transitional development? *California Management Review*, 67(1): 67–87.
Rabe-Hesketh, S., Skrondal, A., & Pickles, A. 2002. *Multilevel selection models using gllamm*. Maastricht: Stata User Group Meeting.
Reeb, D. M., Sakakibara, M., & Mahmood, I. P. 2012. From the editors: Endogeneity in international business research. *Journal of International Business Studies*, 43(3): 211–218.
Root, F. R. 1998. *Entry strategies for international markets*. San Francisco, CA: Jossey Bass.
Runkel, P. J., & McGrath, J. E. 1972. *Research on human behavior: A systematic guide to method*. New York: Holt, Rinehart and Winston.
Salomon, R., & Wu, Z. 2012. Institutional distance and local isomorphism strategy. *Journal of International Business Studies*, 43(4): 343–367.
Sampson, R. C. 2004. The cost of misaligned governance in R&D alliances. *Journal of Law, Economics and Organization*, 20(2): 484–526.
Schmertmann, C. P. 1994. Selectivity bias correction methods in polychotomous sample selection models. *Journal of Econometrics*, 60(1–2): 101–132.
Scott, W. R. 1995. *Institutions and organizations*. Thousand Oaks, CA: Sage.
Shaver, J. M. 1998. Accounting for endogeneity when assessing strategy performance: Does entry mode affect FDI survival? *Management Science*, 44(4): 571–585.
Shaver, J. M. 2013. Do we really need more entry mode studies? *Journal of International Business Studies*, 44(1): 23–27.
Sirower, M. L. 1997. *The synergy trap: How companies lose the acquisition game*. New York: Free Press.
Slangen, A. H. L., & Hennart, J.-F. 2008. Do multinationals really prefer to enter culturally distant countries through greenfields rather than through acquisitions? The role of parent experience and subsidiary autonomy. *Journal of International Business Studies*, 39(3): 472–490.
Thomas, D. C., Cuervo-Cazurra, A., & Brannen, M. Y. 2011. From the editors: Explaining theoretical relationships in international business research: Focusing on the arrows, NOT the boxes. *Journal of International Business Studies*, 42(9): 1073–1078.
Venkatraman, N. 1989. The concept of fit in strategy research: Toward verbal and statistical correspondence. *Academy of Management Review*, 14(3): 423–444.
Walker, G., & Poppo, L. 1991. Profit centers, single-source suppliers, and transaction costs. *Administrative Science Quarterly*, 36(1): 66–87.
Williamson, O. E. 1975. *Markets and hierarchies: Analysis and antitrust implications*. New York: Free Press.
Williamson, O. E. 1991. Comparative economic organization: The analysis of discrete structural alternatives. *Administrative Science Quarterly*, 36(2): 269–296.
Xu, D., Zhou, C., & Phan, P. H. 2010. A real options perspective on sequential acquisitions in China. *Journal of International Business Studies*, 41(1): 166–174.
Yiu, D., & Makino, S. 2002. The choice between joint venture and wholly owned subsidiary: An institutional perspective. *Organization Science*, 13(6): 667–683.

Zhao, M. 2006. Conducting R&D in countries with weak intellectual property rights protection. *Management Science*, 52(8): 1185–1199.
Zhou, K. Z., & Poppo, L. 2010. Exchange hazards, relational reliability, and contracts in China: The contingent role of legal enforceability. *Journal of International Business Studies*, 41(5): 861–881.

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